Auditory Neuropathy / Dys-Synchrony and Cochlear Implantation

October 19 - 20, 2007
The Alfred I. duPont Hospital for Children
Wilmington, Delaware

Examples of studies and projects at the Laboratory are: noise induced hearing loss, auditory processing disorders, ototoxicity, auditory neuropathy/dys-synchrony, and function of the efferent auditory pathways in speech-in-noise listening.

The Auditory Physiology and Psychoacoustics Laboratory is committed to the advancement of hearing science as well as improving the practice of pediatric health care in related areas.

Auditory Neuropathy/Dys-Synchrony program at A.I. duPont Hospital for Children
Auditory Neuropathy / Dys-Synchrony (AN/AD), which affects approximately 10 – 15% of children diagnosed with sensorineural hearing loss, continues to present a challenge to parents and professionals. Our program has developed a diagnostic protocol using a team approach that allows us to manage and track AN/AD children, educate their parents, and counsel their educational team.

Our program specifically targets the identification, treatment and research in the area of AN/AD and allows us to be better able to respond to the needs of the children with AN/AD. The AN/AD team consists of a composite of professionals including a neuroscientist, pediatric audiologists, an educator of the deaf, research staff, a pediatric otologist, speech and language pathologists, and consultants from various other departments (Occupational therapy, Imaging, Cochlear Implant program, Neurology, Genetics, Behavioral Health, and Ophthalmology). This program enhances our ability to conduct research on this disorder and develop effective treatment strategies for optimal outcomes. Additionally, the team is actively involved in educating the community regarding the diagnosis and management of children with AN/AD.

For more information on CPASS contact:
The Center for Pediatric Auditory & Speech Sciences
Nemours Biomedical Research
1600 Rockland Road I Wilmington, DE 19803
Phone: 302.651.6839   Fax: 302.651.6895

The Center for Pediatric Auditory and Speech Sciences (CPASS) at Nemours / Alfred I. duPont Hospital for Children is dedicated to translational research in the audiological and speech sciences with the goal of advancing the practice of pediatric health care in related areas while simultaneously advancing the underlying science.

Four laboratories comprise CPASS: the Auditory Physiology and Psychoacoustics Laboratory headed by Thierry Merlet, PhD; the Craniofacial Outcomes Research Laboratory headed by Linda Vallano, PhD; the Pediatric Balance and Vestibular Disorders Laboratory headed by Robert O’Reilly, MD, FACS; and the Speech Research Laboratory headed by Timothy Bunell, PhD. Individually and together, these laboratories provide strong clinical ties to the duPont Hospital Cleft Palate Clinic, Vestibular Disorders Program, Cochlear Implant Program, and Speech Therapy Program.

Auditory Physiology and Psychoacoustics Research Laboratory
Research at the Auditory Physiology and Psychoacoustics Laboratory focuses on the development of various parts of the auditory system in normal children and children with hearing and vestibular impairments.

Hearing disorders are extremely common in children. The National Institute on Deafness and Other Communication Disorders reports that three children in every thousand are born deaf or hard of hearing and that roughly 1.2 million children nationwide will suffer from hearing loss by age 18. Hearing loss affects a child’s ability to develop normal language skills, succeed academically and communicate effectively. The etiology of hearing disorders remains too often unknown. Diagnosis can be complex and not necessarily realized in a timely fashion. As such, child specific management is problematical and success is not guaranteed.

Many of the research studies at the Laboratory involve, through various collaborations with clinical departments at Nemours, translational research, which will directly influence clinical decision making and interventions in newborn and children.
**Auditory Neuropathy / Dys-Synchrony & Cochlear Implantation**

**Friday, October 19, 2007**

**Moderators:** Thierry Morlet, PhD & Robert O’Reilly, MD

8:15-8:45 Registration

8:45-9:00 Welcome / Opening Comments

Thierry Morlet, PhD, Head, Auditory Physiology and Psychosensory Research Laboratory, Assistant Research Scientist Alfred I. duPont Hospital for Children and Nemours Children’s Clinic-Wilmington

9:00-9:45 Charles Berlin, PhD Research Professor, Communication Sciences & Disorders, University of South Florida, Tampa - AN/AD: Definition, history and management of 300+ patients

9:45-10:30 Bonya Keats, PhD Chairman & Professor, Department of Molecular & Human Genetics Center, LSUHSC, New Orleans - Genetics in AN/AD

10:30-11:00 Break / Equipment Demonstration

11:00-11:45 Fan-Gong Zeng, PhD Professor, Anatomy & Neurobiology, Biomedical Engineering, Cognitive Sciences & Otolaryngology; Research Director of Otolaryngology, University of California, Irvine - Auditory perception in AN/AD

11:45-12:30 Paul Deltenre, PhD Neurology Professor, Université Libre Bruxelles, Belgium - Functional neurophysiology in the diagnosis and management of AN/AD

12:30-1:15 Presentation of cases. Patient variations and changes over time

1:15-2:00 Viroacous—Wireless recording of physiological data

2:00-3:45 Hands-on practice: OAEs and ABRs for screening and diagnosis

3:34-4:15 Building an Auditory Neuropathy program in a hospital setting

4:15-4:30 Final Comments & Questions

**Saturday, October 20, 2007**

**Training Course for Audiologists**

Thierry Morlet, PhD and Charles Berlin, PhD

8:15-8:45 Registration

8:45-9:00 Welcome / Opening Comments

9:00-9:45 Anatomy & Physiology of Hearing-Introduction to AN/AD

9:45-10:30 Diagnosis of AN/AD

10:30-1:00 Break / Equipment Demos

11:00-11:45 Management of AN/AD in infants, children, and adults

11:45-12:30 Lunch

12:30-1:15 Presentation of cases. Patient variations and changes over time

1:15-2:00 Viroacous—Wireless recording of physiological data

2:00-3:45 Hands-on practice: OAEs and ABRs for screening and diagnosis

3:34-4:15 Building an Auditory Neuropathy program in a hospital setting

4:15-4:30 Final Comments & Questions

Learning Objectives:
1. Describe the auditory characteristics of patients presenting with Auditory Neuropathy/Dys-Synchrony

2. List the different tests required for the diagnosis of Auditory Neuropathy/Dys-Synchrony in infants and children

3. Discuss the different options available for the management of Auditory Neuropathy/Dys-Synchrony

**CME/Accreditation**

Nemours is accredited by the Accreditation Council for Continuing Medical Education (ACME) to provide continuing medical education for physicians. Nemours designates this educational activity for a maximum of 5.25 AMA PRA Category 1 Credits™ for Friday only. Physicians should only claim credit commensurate with the extent of their participation in the activity. The Delaware State Board of Nursing accepts AMA PRA Category 1 Credits™ for nursing licensure contact hours. CEUs pending.

This course is supported in part by educational grants in accordance with ACCME Standards. Additional supporters and exhibitors will be disclosed during the conference. Supporters: Advanced Bionics, Alcon Laboratories, Cochlear America, MED EL and Midlantic.

**Registration Form**

Deadline for Registration is Oct. 5, 2007

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**Cancellation Policy**
A full refund will be given for cancellations received before October 5, 2007. No refunds will be given after that date. The hospital is not responsible for any cancellation or change fees assessed by airlines, hotels or travel agency.

**Hotel Accommodations**

The Brandywine Valley Inn is located ¼ mile from the hospital. Please call toll free 800.537.7772 or 302.656.9436.

About Nemours Biomedical Research Symposia

Nemours Biomedical Research is committed to advancing the practice of pediatric medicine through research. We host a continuing series of educational symposia to provide scientists, engineers, clinicians, and interested members of the public opportunities to meet and discuss advanced concepts and technologies directed toward improving healthcare for children. If you would like more information about the Nemours Biomedical Research Symposia, please let us know when you register.

**Americans with Disabilities Act**
In accordance with the Americans with Disabilities Act, the duPont Hospital for Children will provide modifications in teaching methodologies to accommodate individual needs. To request disability accommodations, contact us at least 15 days in advance of the program 302.651.6839.

**Educational Grants**
This course is supported in part by educational grants in accordance with ACME Standards. Additional supporters and exhibitors will be disclosed during the conference. Supporters: Advanced Bionics, Alcon Laboratories, Cochlear America, MED EL and Midlantic.

**Contact**
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